BUDA, Karoly, dr.

A method of collecting human milk in the home. Gyermekgyogyaszat 14 no. 8:244-256 Ag. '63.

1. Hajdu-Bihar Megye Tanacs Korhaz Gyermekosztalya.
(MILK, HUMAN)

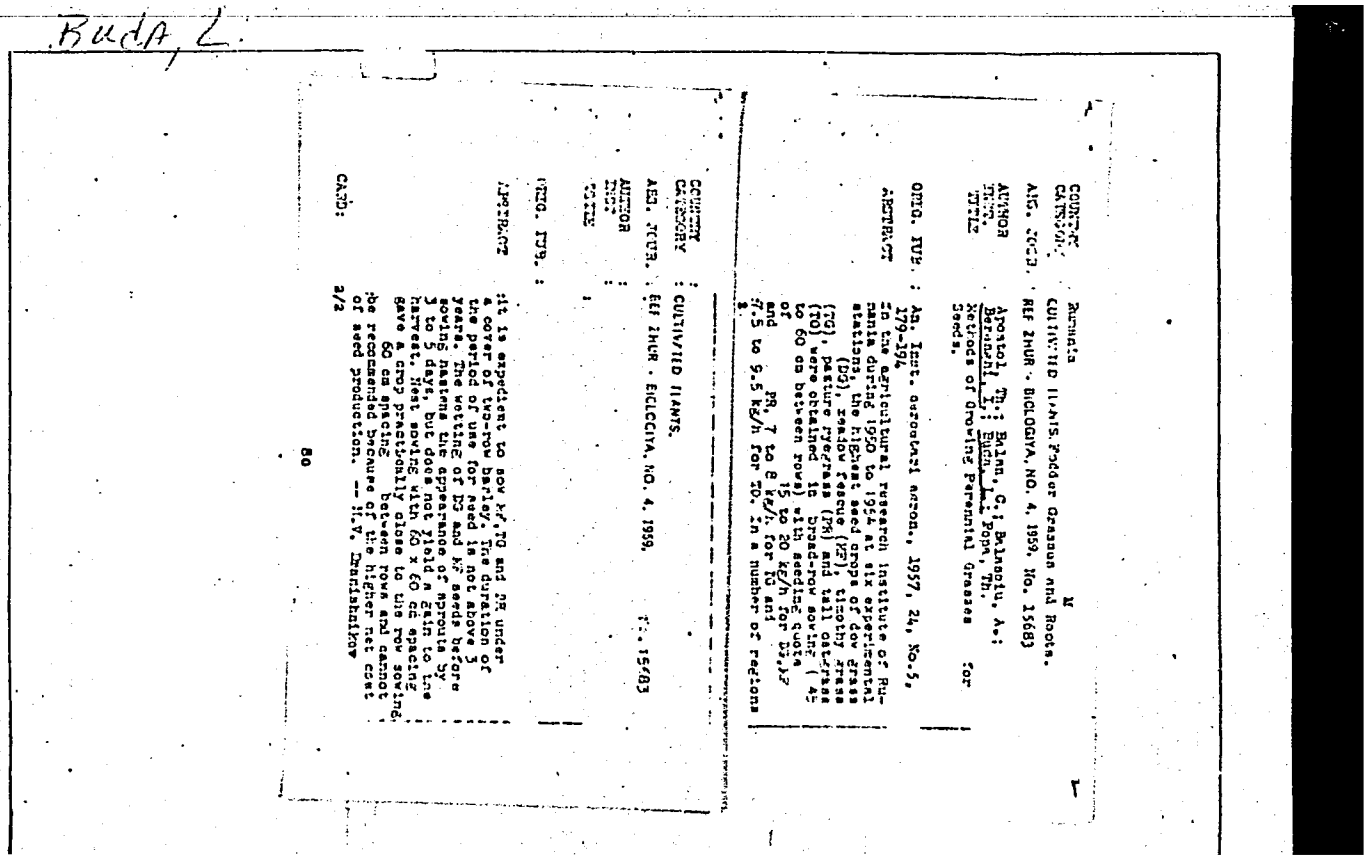
COUNTRY : [illegible]
CATEGORY : Cultivated Plants. Fodder Grasses and Root Crops. M

ABS. JOUR. : RZhBiol., No. 3, 1959, No. 10992

AUTHOR : Buda, L., Ohrejanu, Gr., Rosmerita, I., Velea, C.
INST. : Cluj Experimental Station.
TITLE : On Breeding Transylvanian Red Clover.

ORIG. PUB. : Studii si cercetari agron. Acad. RPR Fil. Cluj, 1957, 8, No. 1-2, 139-146
ABSTRACT : At Cluj Experimental Station in the Rumanian People's Republic, there were obtained by the method of individual and mass selection, the clover lines Cluj-4 and Cluj-9 which in 1952-1956 gave an increase in the yield of green roughage and hay of 12.1 and 10% respectively and of the seeds - 54 and 61% in comparison with the original lines.

CARD: 1/1



Buda, L.

COUNTRY : Rumania
CATEGORY : CULTIVATED PLANTS. Fodder Grasses and Roots.

AGR. ZOOD. : REF ZHUR - BIOLOGIYA, NO. 4, 1959, No. 15683

AUTHOR : Apostol, Th.; Balan, C.; Balaoiu, A.;
INST. : Berindei, I.; Buda, L.; Popa, Th.
TITLE : Methods of Growing Parental Grasses for Seeds.

ORIG. PUB. : Ann. Inst. agronom., 1957, 24, No.5, 179-194

ABSTRACT : In the agricultural research institute of Rumania during 1950 to 1954 at six experimental stations, the highest seed crops of cocksfoot (DG), meadow fescue (FE) timothy grass (PG), pasture ryegrass (PR) and tall oat-grass (TO), were obtained in broadcrow sowing (45 to 60 cm between rows) with seeding quota of and PR, 7 to 8 kg/h for TO and 7.5 to 9.5 kg/h for DG. In a number of regions

2

COUNTRY :
CATEGORY : CULTIVATED PLANTS.

AGR. ZOOD. : REF ZHUR - BIOLOGIYA, NO. 4, 1959, No. 15683

AUTHOR :
INST. :
TITLE :

ORIG. PUB. :

ABSTRACT : it is expedient to sow KF, TO and PR under a cover of two-row barley. The duration of the period of use for feed is not above 3 years. The wetting of DG and KF seeds before sowing hastens the appearance of sprouts by 3 to 5 days, but does not yield a gain to the harvest. Best sowing with 60 x 60 cm spacing gave a crop practically close to the row sowing, 60 cm spacing between rows and cannot be recommended because of the higher net cost of seed production. -- M.V. Dmitrakhirov

CARD: 2/2

80

BUDA, L.

SURNAME, Given Names

Country: Rumania

Academic Degrees: -not given-

Affiliation: -not given-

Source: Bucharest, Comunicarile Academiei Republicii Populare Romine, Vol XI No 12, 1961, pp 1509-1513.

Data: "The Action of Some Oligo-Elements on the Seed Production of Red Clover."

Authors:

MIRON, Gh.
SAVATTI, M.
BUDA, L.

MIRON, Gh; SAVATTI, M.; BUDA, L.

Action of certain microelements on the production of red clover seed. Comunicarile AR 11 no.12:1509-1513 D '61.

1. Comunicare prezentata de Amilcar Vasiliu, membru corespondent al Academiei R.P.R.

GRIGORESCU, C.; IANCU, A.; BUDA, T.

Continuous improvement of the wage system in the Industria Sirmii Enterprise, Cimpia Turzii. Probleme econ 15 no.8: 114-124 Ag '62.

BUIA, Ya.

I will keep my word. Rab. i sial. 34 no.2:4-5 '58. (MIRA 11:2)
(Minsk District--Dairying)

L 30153-66

ACC NR: AP6020328 SOURCE CODE: RU/0012/65/061/001/0037/0040

AUTHOR: Vasiliad, M. (Doctor; Lieutenant colonel); Popescu, P. (Doctor; Lieutenant colonel); Cutoiu, Rodica (Doctor); Popa, V. (Doctor; Major); Budac, A. (Doctor; Captain)

ORG: none

TITLE: Problems of anesthesia and functional re-balancing in gynecological emergiencies. The hemorrhagic syndrome

SOURCE: Revista sanitara militara, v. 61, no. 1, 1965, 37-40

TOPIC TAGS: genitourinary system, military medicine

ABSTRACT: An analysis of 70 cases of various types of hemorrhages of genital origin treated during the years 1962-1963 in the gynecological section of the Central Military Hospital. The cases were classified as: 4 cases of peritoneal inundation of cataclysmic form, 15 cases of peritoneal inundation with a decompensated state of shock, 22 cases of peritoneal inundation with a compensated state of shock, and 29 cases of circumscribed hemorrhage. [JPRS]

SUB CODE: 06 / SUBM DATE: none / ORIG REF: 010 / OTH REF: 006
SOV REF: 001

Card 1/1 TM

RUMANIA

(1)

NICULESCU, Gh., Colonel, Medical Corps, Doctor of Medical Sciences; BACIU, D., Lieutenant-Colonel, Medical Corps; FILIP, I., Major, Medical Corps; BUDAC, A., Captain, Medical Corps; and SAVU, St., Captain, Medical Corps.

"Considerations on the Treatment of Burns of the Hands"

Bucharest, Revista Sanitara Militara, Vol 16, Special No., 1965; pp 192-195

Abstract: Review of specific problems of hand burns: prevention of infection, continuous preservation of function, very precise and delicate grafting technic paying particular attention to prevention of contractures and to judicious suture; precautions needed are discussed in great detail. 6 photographs of pre- and post-operative aspects in one case.

1/1

Surgery

RUMANIA

NICULESCU, Gh., Colonel, Medical Corps, Dr. in Medical Science; BACIU, D., Lieutenant-Colonel, Medical Corps; SAVU, St., Captain, Medical Corps; and BUDAC, A., Captain, Medical Corps.

"One-Stage Surgical Intervention in Inverted Talipes Equinus"

Bucharest, Revista Sanitara Militara, Vol 16, Special No., 1965; pp 230-234

Abstract: Case report and detailed description of the surgical procedure on a 49 year old man with extremely severe talipes equinus, following poliomyelitis and neuromuscular paralysis at age 4. Very good results 5 months following complex one-stage operation. 2 patient photographs, 3 roentgenograms, 2 surgical diagrams.

APPROVED FOR RELEASE: 06/09/2000 CIA-RDP86-00513R000307220009-8"

L 33722-66

ACC NR: AP6025158 SOURCE CODE: RU/0012/65/061/004/0605/0609

AUTHOR: Augustin, A. (Doctor; Colonel); Grigorescu, C. (Doctor; Colonel); Marinescu, I. (Doctor; Major); Roman, I. (Doctor; Major); Boldisor, A. (Doctor; Major); Budac, A. (Doctor, Captain)

ORG: none

TITLE: Some aspects of acute renal insufficiency in urological patients

SOURCE: Revista sanitara militara, v. 61, no. 4, 1965, 605-609

TOPIC TAGS: genitourinary system disease, urology

ABSTRACT: Based on 15 cases of acute renal insufficiency with urologic causes treated at the Central Military Hospital, the authors describe various methods of treatment. Case histories are given for several of the cases. The 15 cases included 4 of pyelorenal infections, one acute insufficiency following lithiasis operation, 3 of obstruction anuria, and 7 of acute renal insufficigney following a chronic renal insufficiency caused by an accident. [JPRS: 33,500]

SUB CODE: 06/ SUBM DATE: 15Oct65/ ORIG REF: 006/ OTH REF: 003

Card 1/1

Budac, R.

2nd

3

651. A short description of the combined unit at Sisak. R. Budac and D. Lalic. *Nafta* (*Yugoslavia*), 1956, 7 (8), 47–50. [The new contained unit, with its Orthoflow cat cracker is described (cf Abs. 835, 1956). (Authors' abstract.)]

GILYAROVSKAYA, Ye.P.; GOLODENKO, G.S.; BUDAGOSSKAYA, G.A.

Treating highmoritis in children by the electrophoretic introduction of penicillin. Pediatriia 37 no.7:88 Jl '59.
(MIRA 12:10)

1. Iz detskogo otdeleniya poliklinik No.2 Moskovskogo gorodskogo otdela zdravookhraneniya.
(PENICILLIN) (ELECTROPHORESIS) (SINUSITIS)

BUDAGOV, A.A., dotsent; IVANOV, V.P., aspirant

Studying a pneumatic sowing apparatus at increased speeds.
Trakt. i sel'khozmash. no.12:19-20 D '65.
(MIRA 18:12)

1. Kubanskiy sel'skokhozyaystvennyy institut.

BUDAGOV, Aleksandr Akimovich

[Mechanizing work procedures in livestock raising] Mekhanizatsiia protsessov truda v zhivotnovodstve. [Krasnodar] Krasnodarskoe kn-vo, 1957. 107 p. (MLRA 10:6)
(Stock and stockbreeding)

BUDAGOV, A.A.

M-2

USSR/Cultivated Plants - Grains.

Abs Jour : Ref Zhur - Biol., No 20, 1958, 91648

Author : Budagov, A.A.

Inst : Kuban Agricultural Institute.

Title : Sowing Corn with Standardized Seeds.

Orig Pub : S. Kh. Kubani Inform. byul. 1957, No 1, 69-77

Abstract : The experiments of the VNII [All-Union Instrument Institute ?] on soybean and castor plants in 1954, those of Kuban Agricultural Institute in 1955 and the production tests on large plots in kolkozes and Sovkhozes. The continuous square-pocket sowing of corn (in which there are no disruptions by hand sowing, and the nests require checking only during 1st weeding) with standardized seeds provided a considerable increase in productivity, economy of labor in care (up to 50%) and seed economy.

Card 1/2

USSR/Cultivated Plants - Grains. M-2

Abs Jour : Ref Zhur - Biol., No 20, 1958, 91648

Recommendations are given on the cleaning and standardization of seeds, and also on the preparation of square-pocket sowing, which are indispensable for sowing continuously with standardized seeds. The rules for standardization of seeds, adopted by the Ministry of Agricultural and the All-Union Scientific Research Institute for the Mechanization of Agriculture as well as the recommendation by the latter on the work schedule of seed-cleaning machines are analyzed. -- N.G. Buyakovich.

Card 2/2

BUDAGOV, A.A.

BUDAGOV, A.A., dotsent.

Improvement in grain harvesting. Sel'khozmashina no.5:12-14 My '57.
(MLRA 10:5)

1.Kubanskiy sel'skokhozyaystvennyy institut.
(Grain--Harvesting)

BUDAGOV, A.

Automatic synchronizer for obtaining higher accuracy in seedling.
Tekh.v sel'khoz. 19 no.5:23-26 My '59. (MIRA 12:7)

1. Kubanskiy sel'skokhozyaystvennyy institut.
(Planters(Agricultural machinery))

BUDAGOV, A.V.

BUDAGOV, A.V.; LEBEDEVA, D.M., glavnyy vrach.

Traumatic aneurism of the descending aorta. Vest.rent.i rad. no.3:83-86 My-Je '53. (MLRA 6:8)

1. Astrakhanskaya gorodskaya poliklinika imeni N.I.Pirogova.
(Aneurism, Aortic)

KEREMOV, Nureddin Kerem; BUDAGOV, B., red.

[Traveling through Azerbaijan] Azerbajchane sejahet. Baky, Azerneshr, 1965. 180 p. [In Azerbaijani] (MIRA 18:11)

GADZHIYEVA, Gyul'sabakh Abdul; BUDAGOV, B., red.

[Establishing landform zones of the northeastern slope of the Lesser Caucasus for agricultural purposes] Kichik qafqazyn shimal-shergjamachynyn landshaft-zonal rajon-lashadyrylmasy; kend teserrufaty-megsedilo. Baky, Azerbajchan SSR elmler Akad. neshrijjaty, 1965. 105 p. [In Azerbaijani] (MIRA 19:1)

BUDAGOV, B.A.

DUMITRASHKO, N.V.; BUDAGOV, B.A.

Some problems in the history of development of the hydrographic net of the northern slope of the southeastern Caucasus. Izv. AN Azerb. SSR no.9:49-60 S '57. (MLRA 10:9)

(Azerbaijan--Hydrography)

BUDAGOV, B.A.; SHIRINOV, N.Sh.

Landslide phenomena in the Atachay Basin. Izv.AN Azerb.SSR. Ser.geol.-geog.nauk no.1:99-113 '58. (MIRA 11:12)
(Atachay Valley--Landslides)

BUDAGOV, B.A.

Orography of the southeastern part of the Greater Caucasus [in Azerbaijani with summary in Russian]. Izv.AN Azerb.SSR. Ser.geol.-geog.nauk no.2:113-130 '58. (MIRA 11:12)
(Azerbaijan--Mountains)

DUMITRASHKO, N.V.; BUDAGOV, B.A.

Ancient glaciation of the northern slope of the southeastern Caucasus (Azerbaijan S.S.R.) Izv. AN Azerb. SSR. Ser. geol.-geog. nauk no.4:109-114 '58. (MIRA 11:12)
(Caucasus--Glacial epoch)

BUDAGOV, B.A.

Present and ancient glaciation in the eastern part of the Greater Caucasus [in Azerbaijani with summary in Russian]. Dokl. AN Azerb. SSR 14 no.2:119-124 '58. (MIRA 11:4)

1.Institut geografii AN AzerSSR.
(Azerbaijan--Glaciers)

BUDAGOV, Budag A.

Recent tectonic movements in the southeastern Caucasus. Dokl. AN Azerb. SSR 14 no.5:379-383 '58. (MIRA 11:5)

1. Institut geograffii AN AzerSSR. Predstavleno akademikom AN AzerSSR M. A. Kashkayem.
(Azerbaijan--Geology, Structural)

BUDAGOV, B.A.; KISIN, I.M..

Present-day glaciation of the eastern part of the Caucasus lying in the Azerbaijan S.S.R. and Daghestan A.S.S.R. Dokl. AN Azerb.SSR 14 no. 8:623-627 '58. (MIRA 11:8)

1. Institut geografii AN AzerSSR. Predstavleno akademikom AN AzerSSR M.M.Aliyevym.

(Caucasus--Glaciers)

BUDAGOV, B.A.

Division of the northern slope of the southeastern Caucasus into geomorphological sections. Trudy Inst. geog. 74:76-85 '58.
(MIRA 11:7)

(Caucasus--Physical geography)

BUDAGOV, B.A.

Landslides on the northern slope of the southeastern Caucasus (Azerbaijan S.S.R.). Trudy Inst. geog. 74:119-131 '58.
(MIRA 11:7)

(Caucasus--Landslides)

KASHKAY, M.-A.; DUMITRASHKO, N.V.; ANTONOV, B.A.; ABASOV, M.A.; BUDAGOV, B.A.; VOLOBUYEV, V.R.; LILIYENBERG, D.A.; MADATZADE, A.A.; RUSTAMOV, S.G.; KHAIN, V.Ye.; SHIKHALIBEYLI, E.Sh.; SHIKHLINSKIY, E.M.; AGAYEVA, Sh., tekhn.red.

[Geomorphology of the Azerbaijan S.S.R.] Geomorfologiia Azerbaidzhanskoi SSR. Baku, 1959. 368 p. (MIRA 12:12)

1. Akademiya nauk Azerbaidzhanskoy SSR, Baku. Institut geografii.
(Azerbaijan--Physical geography)

BUDAGOV, B.A.

Geographical names in Azerbaijan. Izv.AN Azerb.SSR.Ser.geol.-geog.nauk no.1:149-153 '59. (MIRA 12:5)
(Azerbaijan--Names, Geographical)

BUDAGOV, B.A.

Marine and river terraces on the northern slope of the central Caucasus. Izv.AN Azerb.SSR. Ser.geol.-geog. nauk no.2:117-130 '[illegible].
(MIRA 12:11)

(Caucasus--Geology, Structural)

BUDAGOV, B.A.; LILIYENBERG, D.A.; SHIRINOV, N.Sh.

History of the development of hydrography waters in the southeastern Caucasus. Izv. AN Azerb. SSR. Ser.-geol.-geog. nauk no.5:89-103 '59
(Caucasus--Rivers) (MIRA 13:3)

BUDAGOV, B.A.; LILIYENBERG, D.A.

Conference on the recent and ancient glaciation of the Caucasus. Izv.AN Azerb.SSR. Ser.geol.-geog.nauk no.6:169-171 '59. (MIRA 15:4)

(Caucasus—Drift)

BUDAGOV, B.A.; KISIN, I.M.

Recession of some glaciers in the Eastern Caucasus. Dokl. AN Azerb. SSR 5 no.5:401-405 '59. (MIRA 12:8)
(Caucasus--Glaciers)

BUDAGOV, B.A., KISIN, I.M.

Modern glaciation on Bazaar-Dyuzi. Dokl.AN Azerb.SSR 16 no.1:29-33 '60. (MIRA 13:6)

1. Institu geografii AN Azerbaydzhanskoy SSR. Predstavleno akad. AN Azerbaydzhanskoy SSR Sh. F. Mekhtiyevym.
(Bazar-Dyuzi, Mount--Glaciers)

BUDAGOV, B.A.

Achievements in the study of the problems relative to physical geography of the Azerbaijan S.S.R. and its development in Azerbaijani. Izv. AN Azerb. SSR. Ser. geol.-geog. nauk no.2:83-87 '60.
(MIRA 13:10)

(Azerbaijan--Physical geography)

BUDAGOV, B.A.

Geographical theory of Gasanbek Zardabi. Izv. AN Azerb. SSR. geol.-geog. nauk no.3:131-144 '60. (MIRA 13:10)
(Physical geography)

BUDAGOV, B.A.; LILIYENBERG, D.A.; SHIRINOV, N.Sh.

History of the development of hydrography waters in the southeastern Caucasus. Izv. AN Azerb. SSR. Ser. geol.-geog. nauk no.1:123-129 '60. (MIRA 13:11)

(Caucasus--Rivers)

BUDAGOV, B.A.

Genetic classification of mudflow forming centers as revealed by the Kishchay Basin. Izv.AN Azerb.SSR. Ser.geol.-geog. nauk i nefti no.5:133-141 '61. (MIRA 15:1)
(Kishchay Valley--Runoff)

BUDAGOV, B.A.

Recent glaciers of the Shakh-Dag Massif. Trudy Tbil.NIGMI no.9:138-141 '61. (MIRA 15:3)

1. Institut geografii AN Azerbaydzhanskoy SSR.
(Shakh-Dag—Glaciers)

BUDAGOV, B.A.

The exarational and accumulative relief forms of the ancient glaciation in the Shakhdag Massif, Azerbaijan S.S.R. Trudy Inst. geog. AN Azerb. SSR 10:90-109 '61. (MIRA 14:12)
(Shakhdag Range--Landforms)
(Shakhdag Range--Glacial epoch)

BUDAGOV, B.A.

Relation of recent tectonic movements to flash flood erosion on the southern slope of the Greater Caucasus (Azerbaijan). Dokl. AN Azerb.SSSR 17 no.4:309-314 '61. (MIRA 14:6)

1. Institut geografii AN AzerSSR. Predstavlena akademikom AN AZerSSR M.V. Abramovichem.
(Azerbaijan--Earth movements) (Runoff)

DUMITRASHKO, N.V.; LILIYENBERG, D.A.; ANTONOV, B.A.; BAL'YAN, S.P.; BUDAGOV, B.A.; KOVALEV, P.V.; TSERETELI, D.V.

Ancient glaciations of the Caucasus and their correlation with the glaciation of the East European Plain. Trudy Kom. chetv.per. 19:170-180 '62. (MIRA 16:1)
(Caucasus--Glacial epoch)
(East European Plain--Glacial epoch)

BUDAGOV, B.A.

Vertical zonality of recent denudation processes in the southern slope of the Greater Caucasus in connection with the formation of mudflows. Izv. AN Azerb. SSR Ser. geol.-geog. nauk i nefti no.1:45-53 '63. (MIRA 16:6)

(Caucasus--Erosion)

BUDAGOV, B.A.

Anticline in the terrace deposits of the Agrichay River. Dokl. AN Azerb. SSR 19 no.5:27-29 '63. (MIRA 17:2)

1. Institut geografii AN AzSSR. Predstavleno akademikom AN AzSSR A.D. Sultanovym.

BUDAGOV, B.A.; MARDANOV, I.E.

General geomorphological conditions in the Shinchay Valley; mudflow of August 6, 1962. Izv. AN Azerb. SSR. Ser. geol.-geog. nauk i nefti no.6:3-11 '63. (MIRA 18:3)

BUDAGOV, B. A.

Nature of recent tectonic movements in the Shakhdag Massif region (southeastern Caucasus) in connection with the discovery of Upper Sarmatian fauna. Dokl. AN SSSR 155 no. 2:330-332 Mr '64. (MIRA 17:5)

Institut geografii AN AzerbSSSR. Predstavleno akademikom I. P. Gerasimovym.

BUDAGOV, B.A.; IKRAMOV, E.R.

Mudflows passing through the Gavasay River in 1963. Dokl. AN Azerb. SSR 21 no.5:58-61 '65. (MIRA 18:9)

1. Institut geografii AN AzerSSR.

BUDAGOV, Budag Abdulali; SHIRINOV, N.Sh., red.

[Recent and ancient glaciation in the Azerbaijan part or the Greater Caucasus] Azerbajchanyn Bojuk Gafgaz hissesinin muasir ve gedim buzlashmalary. Bady, Azerbajchan SSR Elmler Akademijasy neshrijaty, 1965. 157 p. [In Azerbaijani] (MIRA 18:11)

BUDAGOV, G.S.

Expanding. Med.prom. 11 no.10:47-52 O '57. (MIRA 11:1)
(LENINGRAD--MEDICAL INSTRUMENTS AND APPARATUS)

BUDAGOV, S. M.

STOYANOVSKAYA, V. I., IL'CHENKO, L. V., BUDAGOV, S. M.

Karakul Sheep

Using sperm mixture for insemnation of karakul sheep. Kar. i zver., 5, No. 1, 1952.

Monthly List of Russian Accessions, Library of Congress, June 1952. Unclassified.

BUDAGOV, S. M., MALYSHEV, P. P., and AVER'YANOV, I. Ya.

Ratio of sexes in karakul lambs under varying conditions of developments of paregts. kar. i zver., 5, No 1, 1952.

BUDAGOV, Vl. (Rostov-na-Donu)

Methodology for determining the cost of collective farm products. Vop.ekon. no.6:111-117 Je '56. (MLRA 9:8)
(Collective farms) (Agriculture--Economic aspects)

DUMITRASHKO, N.V.; LILIYENBERG, D.A.; RUDAGOV, V.A.; KHAIN, V.Ye., doktor geolog.nauk, otv.red.; VOLYNSKAYA, V.S., red.izd-va; VOLKOVA, V.V., tekhn.red.

[Relief and recent tectonics of the southeastern Caucasus] Rel'ef i noveishaia tektonika IUgo-Vostochnogo Kavkaza. Moskva, Izd-vo Akad.nauk SSSR, 1961. 815 p. (MIRA 14:3)

(Caucasus--Geology, Structural)

BUDAGOV, Ya.K.

Treatment of acute poliomyelitis in children. Azerb.med.zhur. no.12: 50-55 D '59. (MIRA 13:4)
(POLIOMYELITIS) (THIAMINE)

BUDAGOV, Ya.K.

Materials on a study of acute stem poliocencephalitis in Azerbaijan.
Azerb. med. zhur. no. 10:7-12 O '60. (MIRA 13:10)
(AZERBAIJAN—DISEASES)

BUDAGOV, Ya.K.

Clinical aspects of recurrent forms of trunk polioencephalitis. Azerb. med. zhur. no.12:3-8 D '61. (MIRA 15:3)

1. Iz kafedry nervnykh bolezney (zav. - zasluzhennyy deyatel' nauki, prof. A.V. Feyzullayev) Azerbaydzhanskogo meditsinskogo instituta imeni N. Narimanova.
(ENCEPHALITIS)

BUDAGOV, Ya. K.

Dynamics of neuroinfections during 1953-1962 according to materials of the Nakhichevan Republic N. Narimanov Consolidated Hospital. Azerb. med. zhur. 42 no. 7:44-47 Jl '65
(MIRA 19:1)

BUDAGOV, YU.A.

SUBJECT USSR / PHYSICS CARD 1 / 2 PA - 1852
AUTHOR IVANOV,V.G., PETROV,N.I., RUSAKOV,V.A., BUDAGOV,YU.A., OSIPENKOV,V.T.
TITLE Showers in Lead which are Produced by Electrons with the Energy of 360 ± 30 MeV.
PERIODICAL Žurn.eksp.i teor.fis,31,fasc.6, 1095-1096 (1956)
Issued: 1 / 1957

The data on electron showers published by the present report were determined in the course of the investigation of the results obtained by experiments carried out for the purpose of studying the interaction between negative pions and lead nuclei. The experiments were carried out with the synchrocyclotron of the Laboratory for Nuclear Problems by means of a WILSON chamber of 400 mm diameter in a magnetic field having a field strength of 10^4 Ørsted. The pion bundle passing through a lead plate (thickness 4,6 $g.cm^{-2}$) located inside the chamber contained (2 ± 1)% electrons. Therefore, also cases connected with the production of electron showers in the lead were photographically recorded besides acts of nuclear interaction. On this occasion 159 showers were registered which were excited by electrons with energies of from 330 to 390 MeV. An attached photograph shows such a shower. This number (159) does not include a few cases in which primary electrons came to a standstill in the lead plate, for it is practically impossible to separate them from the many pions which came to a standstill. When computing the number of particles contained in the showers only the secondary electrons with $E \geqslant 8$ were considered. By this

Zurn.eksp.i teor.fis,31,fasc.6,1095-1096 (1956) CARD 2 / 2 PA - 1852

critical selection for secondary electrons such errors were eliminated as are connected with the existence of a background of electrons with low energies in the chamber.

The distribution of the showers over the number of particles, which was found in the course of the experiment, is shown in a table. For reasons of comparison the last column of this table shows the distribution of showers (corresponding to POISSON'S theorem) over the number of electrons. The average number of electrons in a shower according to the data given by the table amounts to 1,77. The energy distribution of the secondary electrons is illustrated by a table. Within the limits of measuring accuracy the average number of secondary electrons in the shower, which was obtained by the above measurements, agrees with the corresponding experimental results obtained by CH.A.O'ANDLAU, Nuovo Cim.,12, 859 (1954)) and also with the value obtained by R.B.WILSON, Phys.Rev.86, 261 (1952) by computing the electron cascade in lead by means of the MONTE CARLO method.

The above is a translation of this short report.

INSTITUTION: United Institute for Nuclear Research (The name of this institute appears here for the first time).

21(8)

AUTHORS: Budagov, Yu. A., Viktor, S., Dzhelepov, V. P., Yermolov, P. F., Moskalev, V. I. SOV/56-35-6-38/44

TITLE: The Electron-Positron Pairs Which Are Formed in the Decay $\pi^0 \longrightarrow e^- + e^+ + \gamma$ (Elektronno-pozitronnyye pary, obrazovannyye pri raspade $\pi^0 \longrightarrow e^- + e^+ + \gamma$)

PERIODICAL: Zhurnal eksperimental'noy i teoreticheskoy fiziki, 1958, Vol 35, Nr 6, pp 1575-1577 (USSR)

ABSTRACT: In a diffusion chamber, which was filled with hydrogen (up to 25 atm) and was irradiated with a 150 MeV negative pion beam of the synchrocyclotron of the Ob"yedinennyy institut yadernykh issledovaniy (United Institute for Nuclear Research), 14 cases of a charge exchange scattering of negative pions by hydrogen with following $\pi^0 \longrightarrow e^- + e^+ + \gamma$ decay of the π^0-meson were recorded according to the Dalitz (Dalits) scheme. This chamber had a sensitive range of 380 mm diameter and operated in a 9000 Oe constant magnetic field. These 14 cases were found when looking over 45000 stereoscopic photographs. Two of these

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The Electron-Positron Pairs Which Are Formed in the Decay $\pi^0 \longrightarrow e^- + e^+ + \gamma$

photos are attached. The results obtained by the evaluation of plates with electron-positron pairs are given by a table. The electron energies E^- and the positron energies E^+ could be determined from the curvature radii of the traces with an inaccuracy of not more than 10-15%. The total energies $E = E^- + E^+$ of all pairs are within the interval of 17-270 MeV, which corresponds to the energy spectrum of the γ-quanta formed by the decay of neutral pions (produced by re-charging). The table also contains the correlation angles α (in the laboratory system) between the electrons and positrons of the pairs and the angles Θ between the direction of motion of the center of mass of the pair and the inciding negative pion. For the general form of angular distribution it holds that $\mathcal{P}(\alpha) \sim$ const $d\alpha/\alpha$ (R. H. Dalitz) (Ref 2). Because of the good correlation between the electrons and positrons produced by the decay $\pi^0 \longrightarrow e^- + e^+ + \gamma$ the angular distribution of pairs must be in very good agreement with that of the γ-quanta originating from the decay $\pi^0 \longrightarrow 2\gamma$. The kinematics of none of the 7 pairs with exactly determined

The Electron-Positron Pairs Which Are Formed in the Decay $\pi^0 \longrightarrow e^- + e^+ + \gamma$

total energy corresponds to the decay $\pi^0 \longrightarrow e^- + e^+$. Besides, not a single decay $\pi^0 \longrightarrow e^- + e^+ + e^- + e^+$ was found. Investigations are still being continued. The author thanks L. I. Krasnoslobodtseva for her help in looking through the photographs. There are 2 figures, 1 table, and 11 references, 2 of which are Soviet.

ASSOCIATION: Ob"yedinennyy institut yadernykh issledovaniy (United Institute for Nuclear Research)

SUBMITTED: August 26, 1958

27(8) SOV/56-36-4-17/70

AUTHORS: Budagov, Yu. A., Viktor, S., Dzhelepov, V. P., Yermolov, P. F., Moskalev, V. I.

TITLE: On the Observation of a $\pi^0 \rightarrow e^- + e^+ + e^- + e^+$-Decay (O nablyudenii raspada $\pi^0 \rightarrow e^- + e^+ + e^- + e^+$)

PERIODICAL: Zhurnal eksperimental'noy i teoreticheskoy fiziki, 1959, Vol 36, Nr 4, pp 1080-1084 (USSR)

ABSTRACT: In the present paper the authors give a very detailed report on the observation of a charge exchange scattering $\pi^- + p \rightarrow \pi^0 + n$ followed by the decay of the π^0-meson into 2 electron pairs. Traces indicating such reactions were found on a stereoscopic photograph, which had been taken in a hydrogen diffusion chamber (hydrogen pressure 25 atm) in the course of $(\pi^- p)$-scattering investigations. The chamber had an outer diameter of 380 mm and a sensitive volume of 6-7 cm at a temperature gradient of 7°C/cm. The chamber was located in a constant magnetic field of 9000 G, the inhomogeneity of which amounted to not more than $\pm 3.5\%$. The photographs were taken by means of a stereoscopic photographic camera with two GOI Gelios-37 object lenses (f = 62 mm); the 35 mm film Pankhrom-Kh had a sensitivity

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of 1000 GOST-units. The pictures were taken through the external glass wall of 25 mm thickness; the object lenses had a resolving power of 50 lines/mm in the visual field center. The π^--meson beam had a mean energy of 160 Mev. Irradiation was carried out on the synchrocyclotron of the United Institute for Nuclear Research. Among 90,000 stereophotographs 1400 cases of elastic $(\pi^- p)$-scattering were found, and 26 cases of charge exchange scattering followed by $\pi^0 \rightarrow e + e + \gamma$-decay were discovered. (Ref 6). Among 25,000 π^0-decays of the usual type $\pi^0 \rightarrow 2\gamma$, one case of a $\pi^0 \rightarrow e^- + e^+ + e^- + e^+$-decay was found. By means of momentum- and angular measurements an estimate of the π^0-mass was given as amounting to (141 ± 8)Mev, which may be in agreement, within the limits of measuring errors, with that of 135 Mev which is today generally assumed. Angular determination in the rest system of the π^0-particle gave the following results for double pair production: Angle between e^- and e^+: $(7 \pm 2)^0$ at momenta of 56.1 and 11.9 Mev/c, and $(12 \pm 4)^0$ at 9.0 and 58.7 Mev/c. The angle between the planes in which the pair tracks were located, is given as $< 37^0$. Finally, other possibilities of interpreting the results obtained are discussed.

they need, however, not to be considered as very probable. The authors in conclusion thank D. W. Joseph (Ref 3) for placing a p...print at their disposal, D. V. Shirkov for discussions, and L. I. Krasnoslobodtseva, T. S. Sazhneva and Yu. L. Saykina for evaluating the films. There are 2 figures, 3 tables, and 10 references, 3 of which are Soviet.

ASSOCIATION: Ob"yedinennyy institut yadernykh issledovaniy (United Institute of Nuclear Research)

SUBMITTED: December 25, 1958

21-(7)
AUTHORS: Budagov, Yu. A., Viktor, S., Dzhelepov, V. P., Yermolov, P. F., Moskalev, V. I.

SOV/56-37-3-54/62

TITLE: The β-Decay of the Negative π-Meson

PERIODICAL: Zhurnal eksperimental'noy i teoreticheskoy fiziki, 1959, Vol 37, Nr 3(9), pp 878 - 880 (USSR)

ABSTRACT: Hitherto only the β-decay of stopped positive mesons has been investigated (Refs 1-6); in references 5 and 6 the relative probability of two such processes was determined as amounting to $(\pi^+ \to e^+ + \nu)/(\pi^+ \to \mu^+ + \nu) \approx 1{\cdot}10^{-4} \pm$ (20-40%), which agrees with the theoretically calculated value for V-A interaction. Theoretically, the same value would have to be obtained for the analogous ratio of negative meson decays. On the search for $\pi^- \to e^-$-decays, the authors of the present "Letter to the Editor" systematically investigated the material of 130- and 160 Mev π^--meson scatterings on protons. A triple evaluation of 100,000 stereophotographs yielded as a result 29 decays in which the secondary particles deviated by $\theta > 20^\circ$; (the maximum angle of deviation in π - μ-decay at 130 Mev was 10°). Of these,

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26 cases were identified as $\mu^- \rightarrow e^-$ and 3 as $\pi^- \rightarrow e^-$ decays. Figure 1 shows the momentum distribution of the electrons of the two decay forms in the rest system of the respective primary particle. A photograph of a $\pi^- - e^- + \nu$-decay (found in a diffusion chamber at 9,000 G) is shown by figure 2. The results obtained by the three $\pi^- - e^-$-decays found are given in a table:

	Laboratory system			Rest system of the π^--meson	
	π^- momentum (Mev/c)	e^- momentum (Mev/c)	$\theta(^o)$	e^- momentum (Mev/c)	θ (in degrees)
1.	228 ± 10	104 ± 8	42.5 ± 0.5	74 ± 7	108 ± 2
2.	207 ± 11	103 ± 3	42 ± 0.5	71 ± 4	102 ± 2
3.	266 ± 6	156 ± 26	26 ± 0.5	68 ± 11	86 ± 1

It is found that the identification of these processes is most probably correct, because the maximum electron momentum in the μ^--rest system amounts to only 52.9 Mev/c, whereas that measured in this case is considerably higher. Therefore, it is not possible that $\mu^- \rightarrow e^-$-decays are concerned. Also other processes of this kind, as e.g. $\pi^- \rightarrow \mu^- \rightarrow e^-$-decay during flight, with a

The β-Decay of the Negative π-Meson

SOV/56-37-3-54/62

short μ^--track are improbable. The relative probability of these processes was determined as amounting to $(\pi^- \to e^- + \bar{\nu})/(\pi^- \to \mu^- + \bar{\nu}) = (1.2 \pm 0.7) \cdot 10^{-4}$, a value which actually, within the error limits agrees with the values calculated on the basis of V-A interaction for the corresponding positive decay. The authors finally thank T. S. Sazhneva, L. I. Krasnoslobodtseva, and Yu. L. Saykina for their assistance in evaluating the plates. There are 2 figures, 1 table, and 11 references, 3 of which are Soviet.

ASSOCIATION: Ob"yedinennyy institut yadernykh issledovaniy (Joint Institute of Nuclear Research)

SUBMITTED: June 13, 1959

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BUDAGOV, YU. A., DZHELEPOV, V. P., DZHAKOV, N. I., IVANOV, V. G., LEPILOV, V.I.,
MOSKALEV, V. I., FLYAGIN, V. B., SHATET, T.,

"The One-Meter Propane Bubble Chamber in Magnetic Field"

paper presented at the Intl Conference on High Energy Physics, Rochester, N. Y.
and/or Berkly California, 25 Aug - 16 Sep 1960.

82412

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S/056/60/038/03/10/033
B006/B014

AUTHORS: Budagov, Yu. A., Viktor, S., Dzhelepov, V. P., Yermolov, P. F., Moskalev, V. I.

TITLE: Elastic Scattering of 128- and 162-Mev π^--Mesons by Protons

PERIODICAL: Zhurnal eksperimental'noy i teoreticheskoy fiziki, 1960, Vol. 38, No. 3, pp. 734-746

TEXT: The article under review was read at the Sixth Meeting of the Scientific Council of OIYaI held in May, 1959, and at the Conference on the Physics of High-energy Particles which took place in Kiyev in July, 1959. This article contains the results of studies of the elastic scattering of negative 128- and 162-Mev pions by protons in a hydrogen diffusion chamber. The experimental arrangement is schematically represented in Fig. 1. The π^--mesons were produced by bombarding a 40 mm thick beryllium target with the 670-Mev proton beam of the synchrocyclotron of OIYaI. About 90,000 stereophotographs were taken. The diffusion chamber is schematically shown in Fig. 2. The chamber operated at pressures of up to 25 atm and had an inside temperature gradient of 7 deg/cm. The sensitive layer was 6 - 7 cm high. A solenoid magnet of the

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type MS-4A was used to generate a constant magnetic field (9,000 gauss). This electromagnet was produced at NII EFA by N. S. Strel'tsov, A. V. Ugamm, N. N. Indyukov, Yu. P. Semenov, V. I. Sergeyeva, and A. G. Studennikova. D. P. Vasilevskaya and Yu. N. Denisov supplied a magnetometer based on the Hall effect. The negative pion beams had an energy of 128±8 and 162±10 Mev, the sum of the μ^--meson and electron admixture amounted to (16±2)%. The pictures were evaluated twice. The efficiency of this stereoscopic evaluation was 97 per cent. 379 cases of scattering at 128 Mev and 1,113 cases at 162 Mev were found. Fig. 3 shows the distribution of the number of elastic scattering events with respect to the height of the sensitive layer. At both energies the distributions reached peaks at about 40 mm. The criteria for the selection of scattering events are compiled. The total elastic π^-p-scattering cross section was calculated from the total track length L of the π^--mesons. L was determined by means of the formula $L = 15.36\ T\delta/\cos\alpha_m$ (T - total number of tracks, 15.36 is the width of the area S (Fig. 4), α_m the mean angle of slope of the tracks with respect to the edge of S, $\delta = 1$). Thus it holds that $\sigma_{exp} = N\beta/Ln_{eff}(1-q)r$ (N - number of scattering events, n_{eff} - effective

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Elastic Scattering of 128- and 162-Mev π^--Mesons by Protons

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number of hydrogen nuclei per cm^3, β - a coefficient, q - the μ^-- and electron admixtures in the beam, r - the efficiency of evaluation of the pictures). For the two energies at which measurements were made, Table 1 lists all the quantities appearing in these formulas, as well as the root-mean-square errors. Table 2 contains the values obtained for the total elastic scattering cross sections in the energy range 100 - 200 Mev. Tables 3 and 4 list the differential elastic scattering cross sections $d\sigma/d\Omega$ for 128 and/or 162 Mev. In the following, the authors discuss numerous details concerning the calculation and application of the necessary corrections. For both energies the total elastic scattering cross sections amounted to $(12.8\pm1.0).10^{-27}cm^2$ and $(21.4\pm1.2).10^{-27}cm^2$. Here, the angular-distribution formula $d\sigma/d\Omega = a + b\cos\theta + c\cos^2\theta$ holds, and the coefficients a,b,c for both energies are given on p. 743. Fig. 8 shows the two curves of angular distribution. The following relation holds for the differential forward scattering cross section: $d\sigma(0)/d\Omega = a + b + c = (2.20 \pm 0.32).10^{-27}cm^2/steradian$ (for 128 Mev) and $(3.73 \pm 0.32).10^{-27}cm^2/steradian$ (for 162 Mev). At these

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energies the real parts of the forward scattering amplitudes (in the center-of-mass system) in $\lambda\!\!\!^{-}/m_\pi c$ units amount to 0.261 ± 0.031 and 0.216 ± 0.038, respectively. These values agree with those calculated from dispersion relations if the coupling constant $f^2 = 0.08$ is used. The authors finally thank L. I. Lapidus, S. N. Sokolov, and V. A. Meshcheryakov for their discussions, L. I. Krasnoslobodtseva, T. S. Sazhneva, and Yu. L. Saykina for their assistance, as well as A. A. Andrianova and G. D. Malysheva for their calculations. Further, N. P. Klepikov, V. G. Zinov, A. D. Konin, S. M. Korenchenko, and B. M. Pontekorvo are mentioned in this article. There are 9 figures, 4 tables, and 34 references, 10 of which are Soviet.

ASSOCIATION: Ob"yedinennyy institut yadernykh issledovaniy (Joint Institute of Nuclear Research)

SUBMITTED: September 18, 1959

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B019/B070

24.6900

AUTHORS: Budagov, Yu. A., Viktor, S., Dzhelepov, V. P., Yermolov, P.F., Moskalev, V. I.

TITLE: Internal Conversion Pairs in the Decay of a Neutral π-Meson

PERIODICAL: Zhurnal eksperimental'noy i teoreticheskoy fiziki, 1960, Vol. 38, No. 4, pp. 1047-1052

TEXT: This work was communicated to the sixth session of the Uchenyy sovet OIYaI (Scientific Council of the Joint Institute of Nuclear Research) in May, 1959, and the Conference on the High Energy Particles in Kiyev in July, 1959. Here, data obtained from 27 events of the decay $\pi^0 \longrightarrow e^- + e^+ + \gamma$ are discussed. These events were detected in a diffusion chamber exposed to π^- meson beams with energies 128 and 162 Mev. The chamber was filled with hydrogen at a pressure of 25 atm and was placed in a magnetic field of 9000 gauss. The π^0-mesons were produced as a result of a charge exchange scattering. The determination of the relative π^0-decay probability is treated in great detail; its theoretical value is $2\rho_0 = w(\pi^0 \longrightarrow e^- + e^+ + \gamma)/w(\pi^0 \longrightarrow 2\gamma) = 0.0118$. In this connection they discuss

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some American results. The value $2\rho_0 = 0.0117 \pm 0.0015$ was experimentally obtained by the authors. The angle and energy characteristic of the pairs has been studied from the data for all the 27 events given in Table 2. The angular distribution of the pairs according to the correlation angles agrees well with the data obtained theoretically by Dalitz (Fig. 2). Also the distribution of the pairs according to the parameters $y = |p_{e^-} - p_{e^+}| \,/\, |\vec{p}_{e^-} + \vec{p}_{e^+}|$ and $x = (E^- + E^+)^2 - (\vec{p}_{e^-} + \vec{p}_{e^+})^2$ (Figs. 3 and 4) agree with the theoretical curves. Here p_{e^-} and p_{e^+} are the momenta of the electrons and the positrons, respectively and E^+ and E^- the total energies. The same is true for the angular distribution of the pairs relative to the direction of π^- mesons in the $(\pi^- - p)$ center of mass system (Fig. 5). Among the cases studied here, there was found one event with the mode of decay $\pi^0 \longrightarrow e^- + e^+ + e^- + e^+$. The authors thank Professor R. Dalitz for making available some of the unpublished theoretical calculations. There are 5 figures, 2 tables, and 14 references: 5 Soviet, 8 US, and 1 Italian.

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03713

Internal Conversion Pairs in the Decay of a Neutral π-Meson

S/056/60/038/004/006/048
B019/B070

ASSOCIATION: Ob"yedinennyy institut yadernykh issledovaniy (Joint Institute of Nuclear Research)

SUBMITTED: September 18, 1959

X

Card 3/3

BUDAGOV, Yu.A.; YERMOLOV, P.F.; KUSHNIRENKO, Ye.A.; MOSKALEV, V.I.

Excitation of the He^4 nucleus by 150 Mev. π^--mesons. Zhur. eksp. i teor. fiz. 40 no.6:1615-1617 Je '61. (MIRA 14:8)

1. Ob"yedinennyy institut yadernykh issledovaniy.
(Mesons) (Helium)

BUDAGOV, Yu.A.; YERMOLOV, P.F.; KUSHNIRENKO, Ye.A.; MOSKALEV, V.I.; SARANTSEVA, V.R., tekhn. red.

[Interaction of 153 Mev. negative π-mesons and helium] Vzaimodeistvie otritsatel'nykh π-mezonov s geliem pri energii 153 Mev. Dubna, Ob"edinennyi in-t iadernykh issl., 1962. 32 p. (MIRA 15:3)
(Nuclear reactions) (Mesons) (Helium)

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S/056/62/042/005/009/050
B104/B102

AUTHORS: Budagov, Yu. A., Yermolov, P. F., Kushnirenko, Ye. A., Moskalev, V. I.

TITLE: Interaction between 153-Mev π^--mesons and helium

PERIODICAL: Zhurnal eksperimental'noy i teoreticheskoy fiziki, v. 42, no. 5, 1962, 1191-1208

TEXT: The interaction between 153-Mev π^--mesons and He^4 at 17.6 atm helium pressure and a magnetic field strength of 12,000 oersteds was studied in a diffusion chamber. The maximum drop of the magnetic field strength in the central range of the operating volume was 3%, the maximum nonuniformity of the magnetic field was ±4%. The mean meson energy was determined from the curvature of the meson tracks. The half-width of the meson energy distribution in the chamber was 9 Mev. The μ^- and electron admixture was (16 ± 2)%. The total π^- He interaction cross section, the elastic scattering cross section, and the cross sections for a number of inelastic processes were determined by measuring the total length of π^--meson tracks in the chamber. The angular distribution of elastic π^- He

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interaction is of diffractional nature with a distinct first minimum (at 80°) and a second maximum (at 100°). Calculations of elastic scattering on the basis of an optical model with square complex potential, $V = V_R + iV_I$, showed that best agreement with experimental data was obtained with $V_R = -18 \pm 7$ Mev, $V_I = -63 \pm 6$ Mev, $r_o = 1.5 \cdot 10^{-13}$ cm. These values agree with those found by R. M. Frank et al. (Phys. Rev., 101, 891, 1956). The angular distribution of π^--mesons quasi-elastically scattered from intranuclear nucleons is compared with theoretical results of K. M. Watson et al. (Nuovo Cim., 10, 453, 1958). The probability of multiple pion scattering from nuclei and the charge exchange scattering cross section are estimated. The cross section of inelastic scattering with charge exchange is about 10% of the cross section of inelastic interaction. There are 8 figures and 4 tables.

ASSOCIATION: Ob"yedinennyy institut yadernykh issledovaniy (Joint Institute of Nuclear Research)

SUBMITTED: December 29, 1961

HUDAGOV, YU. A.

"On the bubble chamber operation in the regime of auto-oscillations."

report submitted for the 1962 International Conference on Insturmentation for High Energy Physics at Cern, Geneva, 16-18 July 1962

BUDAGOV, Yu.A.; YERMOLOV, P.F.; KUSHNIRENKO, Ye.A.; MOSKALEV, V.I.

Interaction between 153 Mev. negative π-mesons and helium.
Zhur. eksp. i teor. fiz. 42 no.5:1191-1208 My '62.
(MIRA 15:9)

1. Ob"yedinennyy institut yadernykh issledovaniy.
(Mesons--Scattering) (Helium)

BUDAGOV, Yu.A.; DZHELEPOV, V.P.; IVANOV, V.G.; LOMAKIN, Yu.F.; FLAGIN, V.B.; SHLYAPNIKOV, P.V.

[Gas hydrodynamic design of the mechanism of pressure variation in a large-scale bubble chamber] Gidrogazodinamicheskii raschet mekhanizma izmeneniia davleniia bol'shoi puzyr'kovoi kamery. Dubna, Izd-vo Ob"edinennyi in-t iadernykh issledovanii, 1963. 18 p. (MIRA 16:10)
(Bubble chamber) (Fluid dynamics)

ACCESSION NR: AP4033105 S/0120/64/000/002/0046/0050

AUTHOR: Budagov, Yu. A.; Dzhelepov, V. P.; Ivanov, V. G.; Lomakin, Yu. F.; Flyagin, V. B.; Shlyapnikov, P. V.

TITLE: Hydrodynamics of bubble chambers

SOURCE: Pribory* i tekhnika eksperimenta, no. 2, 1964, 46-50

TOPIC TAGS: hydrodynamics, nuclear research, bubble chamber, bubble chamber theory

ABSTRACT: The hydrodynamics of the process of expansion in a typical bubble chamber is mathematically described. The pressure variation along the chamber-neck axis is:

$$\frac{\partial \mathcal{P}}{\partial x} = -\rho \frac{\partial w}{\partial t} \mp \rho w \frac{\lambda_\Sigma w}{2D},$$

where w is the velocity of the incompressible (ρ = const) liquid in a constant cross-section $F = \pi D^2/4$ tube. After linearization and simplification, the equation yields this solution: $P(t) = \left(P_0 \cos \omega t + P_0 \frac{b}{\omega} \sin \omega t\right) e^{-bt}$. Here, the ratio b/ω

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ACCESSION NR: AP4033105

is a dimensionless parameter that characterizes the role of friction in a bubble chamber. For practical chambers, the condition $b/\omega \ll 1$ can be represented by $(V_0/D^3) \ll 3{,}000$. The gas expansion (as the pressure changes) occurs simultaneously with the liquid expansion in the chamber. This combined process is also described by a set of equations from which design formulas are derived. The method was used to design a 1-meter bubble chamber in the Joint Nuclear Research Institute. "The authors are indebted to I. A. Charny*y for his attention and numerous useful discussions which greatly helped in formulating and solving some of the problems in the hydrodynamics of transient motion." Orig. art. has: 1 figure and 17 formulas.

ASSOCIATION: Ob"yedinenny*y institut yaderny*kh issledovaniy (Joint Nuclear Research Institute)

SUBMITTED: 01Jun63 DATE ACQ: 11May64 ENCL: 00

SUB CODE: NS NO REF SOV: 005 OTHER: 002

Card 2/2

ACCESSION NR: AP4018366 S/0120/64/000/001/0061/0068

AUTHOR: Bogomolov, A.V.; Budagov, Yu. A.; Vasilenko, A.T.; Dzhelepov, V.P.; D'yakov, N.I.; Ivanov, V.G.; Kladnitskiy, V.S.; Lepilov, V.I.; Lomakin, Yu. F.; Moskalev, V.I.; Flyagin, V.B.; Shetet, T.I.; Shlyapnikov, P.V.

TITLE: Meter-long bubble chamber in a magnetic field

SOURCE: Pribory* i tekhnika eksperimenta, no. 1, 1964, 61-68

TOPIC TAGS: bubble chamber, meter long bubble chamber, 10 Gev particle beam, bubble chamber in magnetic field, electromagnet bubble chamber

ABSTRACT: A bubble chamber with a sensitive volume of 1x0.5x0.38 m is described. The chamber is intended for studying the particle beams up to 10 Gev obtained from the OIYaI proton synchrotron. The chamber design was described earlier (Yu. A. Budagov, et al. International Conference on High-Energy Acceleration and Instrumentation, Berkeley, 1960); more details are supplied in the present article. Propane or some other liquid suitable for a particular experiment may serve as a working fluid. The chamber is placed in a 17-kilo-oersted magnetic field derived from a 2,200-kw electromagnet. The error in a

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ACCESSION NR: AP4018366

5-Gev/s-pulse measurement, evaluated from multiple scattering in propane, is ± 3.2%. In 1963, the chamber was installed at the output of the magnetic circuit of a π^--meson beam whose energy lies between 4 and 7 Gev. "The authors consider it their duty to thank V. N. Sergiyenko, N. I. Frolov, K. A. Baycher, and the personnel of the experimental shop for their help in building the outfit. The authors are thankful to V. I. Veksler, N. I. Pavlov, and I. V. Chuvilo for their assistance in constructing the magnetic circuit of the π^--meson beam. We are indebted to A. S. Strel'tsov, B. Ye. Gritskov, B. V. Rozhdestvenskiy, and L. N. Fedulov for designing and building the magnet. The authors are deeply grateful to N. P. Moshkov, V. A. Lebedev, and S. P. Zunin who spent much effort and skill in all stages of constructing and aligning the outfit." Orig. art. has: 8 figures.

ASSOCIATION: Ob"yedinennyy institut yaderny*kh issledovaniy (Joint Institute of Nuclear Studies)

SUBMITTED: 22Mar63 DATE ACQ: 18Mar64 ENCL: 00

SUB CODE: NS NO REF SOV: 003 OTHER: 002

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L 8581-65 EWT(m) DIAAP/AFWL
ACCESSION NR: AP4048496 S/0120/64/000/004/0056/0065

AUTHOR: Budagov, Yu. A.; Dzhelepov, V. P.; Ivanov, V. G.; Lomakin, Yu. F.; Flyagin, V. B.; Shiyapnikov, P. V.

B

TITLE: Hydrogasdynamic computation of a mechanism for variation of the pressure in a large bubble chamber 19

SOURCE: Pribory* i tekhnika eksperimenta, no. 4, 1964, 56-65

TOPIC TAGS: hydrogasdynamic computation, bubble chamber, pressure variation mechanism, construction parameter, pneumonic device

Abstract: The article presents a hydrogasdynamic method for computing the basic parameters of construction of a bubble chamber and the mechanism for variation of the pressure, which was used during development of the meter bubble chamber at the Joint Institute of Nuclear Research. The mathematical description of the processes of pressure variation within the chamber and in the system of the pneumonic devices is sufficiently general; consequently, the method described is applicable to the computation of various constructional schemes and is of practical interest. There are eight figures, one of which shows the detailed construction of the mechanism for variation of pressure.

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ACCESSION NR: AP4048496

ASSOCIATION: Ob"yedinenny*y institut yaderny*kh issledovaniy (Joint Institute of Nuclear Research)

SUBMITTED: 08Aug63 ENCL: 00 SUB CODE: NP, MA

NO REF SOV: 012 OTHER: 007 JPRS

Card 2/2

BUDAGOV, Yu.A.; DZHELEPOV, V.P.; IVANOV, V.G.; LOMAKIN, Yu.F.; FLYAGIN, V.B.; SHLYAPNIKOV, P.V.

Hydrodynamic study of the operating conditions of bubble chambers. Prib. i tekh. eksp. 9 no.5:55-60 S-O '64.
(MIRA 17:12)

L 00069-66 EWT(m) DIAAP

ACCESSION NR: AP5021328 UR/0120/65/000/004/0042/0045
539.1.073.3

AUTHOR: Budagov, Yu. A.; Dzhelepov, V. P.; Lomakin, Yu. F.; Flyagin, V. B.; Shlyapnikov, P. V.

TITLE: Hydrodynamics of the resonant bubble chamber

SOURCE: Pribory i tekhnika eksperimenta, no. 4, 1965, 42-45

TOPIC TAGS: proton accelerator, particle accelerator component, synchrotron, hydrodynamics, proton resonance

ABSTRACT: The authors proposed earlier that the speed of bubble chambers be increased by the excitation of periodic pressure oscillation within the working substance with frequencies equal to the resonant frequency of the liquid filling the chamber. In the present article, considering the bubble chamber as a special kind of volume resonator, the authors examine more closely the hydrodynamics of the processes of excitation within the liquid of undamped periodic pressure oscillations with the aim of increasing the speed of bubble chambers. The applicability of such chambers in proton synchrotron experiments is discussed. Expressions of practical interest are derived, and they connect the basic con-

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structive and hydrodynamic parameters of resonant chambers. Results show that there are no essential obstacles to a successful excitation and maintainance of the oscillations. Orig. art. has: 15 formulas and 2 figures.

ASSOCIATION: Ob"yedinennyy institut yadernykh issledovaniy, Dubna (Joint Institute of Nuclear Research)

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BUDAGOVA, G.G.

BUDAGOVA, G.G.; BERESLAVICH, T.N.; POPOVA, P.S.

Role of helminths and of intestinal protozoa in bacillary dysentery. Med. paraz.i paraz.bol. no.4:351-353 Jl-Ag '53. (MLRA 6:9)
(Dysentery) (Worms, Intestinal and parasitic)

BUDAGOVA, G.G.

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Work experience of the day hospital for the treatment of helminthiasis. Med.paras.i paras.bol. no.6:551-553 N-D '53. (MLRA 6:12)

1. Iz Instituta malyarii i meditsinskoy parazitologii Ministerstva zdravookhraneniya RSFSR (direktor instituta S.N.Pokrovskiy).
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Role of Lamblia intestinalis in bacillary dysentery. Pediatriia 39 no.3:88-89 My-Je '56. (MLRA 9:9)

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Form of intestinal and pulmonary strongyloidiasis. Sov.med. 21 Supplement:29 '57. (MLRA 11:2)

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(NEMATODA) (LUNGS--DISEASES)
(INTESTINES--DISEASES)